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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,806	03/06/2002	Masahiko Kawase	36856.648	6896

7590 06/05/2003

KEATING & BENNETT LLP
Suite 312
10400 Eaton Place
Fairfax, VA 22030

EXAMINER

BEREZNY, NEMA O

ART UNIT	PAPER NUMBER
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2813

5

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/090,806

Applicant(s)

KAWASE ET AL.

Examiner

Nema O Berezny

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/690,870.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Person et al. (5,321,573). Person discloses a manufacturing method of a chip-type composite electronic component comprising the steps of: forming an inductor characteristic sheet by laminating a ceramic layer having an internal coil conductor (Fig.3 el.28); forming a thermistor characteristic sheet by laminating a ceramic layer having an internal electrode and having a predetermined resistance temperature characteristic (el.24,26; col.7 line 28 – col.8 line 16); forming a compound multilayer body by adhering the inductor characteristic sheet and the thermistor characteristic sheet by pressure (el.12; col.2 lines 48-53) with a diffusion prevention layer sandwiched therebetween (el.40; col.3 lines 52-56); baking a compound multilayer body (col.5 lines 28-33); forming external electrodes (Fig.1 el.14,16,18) on an end surface of a compound multilayer body in which at least one end part of an internal coil conductor and at least one end part of an internal electrode are exposed. Person also discloses wherein one end of the internal coil conductor of the inductor is connected to one of the external electrodes, one end of the internal electrode of the thermistor is connected to

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the other of the external electrodes, and the other end of the internal coil conductor of the inductor and the other end of the internal electrode of the thermistor are connected together (Figs.4-23; col.4 lines 20-26); connecting one end of the internal coil conductor of the inductor and one end of the internal electrode of the thermistor to one of the external electrodes, and connecting the other end of the internal coil conductor of the inductor and the other end of the internal electrode of the thermistor to the other of the external electrodes (Figs.4-23; col.4 lines 20-26); and providing an intermediate insulating layer (el.80) and laminating the inductor and the thermistor via the intermediate insulating layer (col.4 lines 27-31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Person as applied to claims 9-11 above, and further in view of Nagakubo et al. (5,966,938). Person does not disclose a method wherein said thermistor is a negative-characteristic or a positive-characteristic thermistor. However, Nagakubo discloses a control circuit device comprising a negative-characteristic and a positive characteristic thermistor (col.8 lines 37-47). Therefore, it would have been obvious to a person skilled in the art at the time of the invention to use the negative and positive characteristic

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thermistors of Nagakubo with the method of Person in order to individually vary and control both a heating operation and a cooling operation for said device (col.8 lines 37-39).

Claims 15-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Person et al. (5,321,573). Person discloses a manufacturing method of a chip-type composite electronic component comprising the steps of: forming an inductor characteristic sheet by laminating a ceramic layer having an internal coil conductor (Fig.3 el.28); forming a thermistor characteristic sheet by laminating a ceramic layer having an internal electrode and having a predetermined resistance temperature characteristic (el.24,26; col.7 line 28 – col.8 line 16); forming a compound multilayer body by adhering the inductor characteristic sheet and the thermistor characteristic sheet by pressure (el.12; col.2 lines 48-53) with a diffusion prevention layer sandwiched therebetween (el.40; col.3 lines 52-56); baking a compound multilayer body (col.5 lines 28-33); forming external electrodes (Fig.1 el.14,16,18) on an end surface of a compound multilayer body in which at least one end part of an internal coil conductor and at least one end part of an internal electrode are exposed. However, Person does not disclose baking the inductor characteristic sheet, baking the thermistor characteristic sheet, then adhering and laminating the baked inductor and thermistor characteristic sheets. It would have been obvious to a person skilled in the art at the time of the invention to preform and bake the thermistor and inductor sheets separately, then adhere and laminate them together in order to vary the electrical properties of the final

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device and achieve the desired properties using preformed subassemblies (Person – col.3 lines 42-51).

Person also discloses wherein one end of the internal coil conductor of the inductor is connected to one of the external electrodes, one end of the internal electrode of the thermistor is connected to the other of the external electrodes, and the other end of the internal coil conductor of the inductor and the other end of the internal electrode of the thermistor are connected together (Figs.4-23; col.4 lines 20-26); connecting one end of the internal coil conductor of the inductor and one end of the internal electrode of the thermistor to one of the external electrodes, and connecting the other end of the internal coil conductor of the inductor and the other end of the internal electrode of the thermistor to the other of the external electrodes (Figs.4-23; col.4 lines 20-26); and providing an intermediate insulating layer (el.80) and laminating the inductor and the thermistor via the intermediate insulating layer (col.4 lines 27-31).

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Person as applied to claims 15-17 above, and further in view of Nagakubo et al. (5,966,938). Person does not disclose a method wherein said thermistor is a negative-characteristic or a positive-characteristic thermistor. However, Nagakubo discloses a control circuit device comprising a negative-characteristic and a positive characteristic thermistor (col.8 lines 37-47). Therefore, it would have been obvious to a person skilled in the art at the time of the invention to use the negative and positive characteristic thermistors of Nagakubo with the method of Person in order to individually vary and

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control both a heating operation and a cooling operation for said device (col.8 lines 37-39).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nema O Berezny whose telephone number is (703) 305-3445. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on (703) 308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

NB
May 28, 2003


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800